

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for target device discovery on a network, comprising:

multicasting a signal from a master initiator over the network;

determining if a previously registered target re-registered with the master initiator by a
5 unicast to the master initiator;

~~maintaining~~ removing the previously registered target on a list of active targets connected to the network when the previously registered target has not re-registered within a selected re-registration interval; and

10 sending out a next multicast, wherein the next multicast includes with information regarding the previously registered target when the previously registered target is determined to have re-registered since the multicasting of the signal, the information regarding the previously registered target notifying to notify other initiators to maintain the previously registered target on the list of targets.

2. (Currently amended) A method for ~~peripheral target~~ target device discovery on a network as recited in claim 1, wherein the other initiators maintain the previously registered target on initiator target lists in response to receiving the information regarding the previously registered target the next multicast.

3. (Currently amended) A method for target device discovery on a network as recited in claim 1, wherein the master initiator is elected by comparing device identification numbers of a plurality of initiators connected to the network, ~~the master initiator having the highest device identification number~~.

4. (Currently amended) A method for target device discovery on a network as recited in claim 1, wherein ~~the signals~~ the signal from the master initiator is in a form of ~~master identification packets~~ a master identification packet.

5. (Currently amended) A method for target device discovery on a network as recited in claim 1, ~~wherein the next multicast has a sequence number greater by one than a previous sequence number~~ wherein the signal is a first multicast, the next multicast is a second multicast, the method further comprising:

5 causing a second initiator, in response to receiving a third multicast, the third multicast not including the information regarding the previously registered target, to compare a sequence number of the third multicast with a previous sequence number of a previous multicast, the previous multicast being a most recently received multicast prior to the third multicast.

6. (Currently amended) A method for target device discovery on a network as recited in ~~claim 5 wherein each of the other initiators~~ claim 5, wherein the second initiator determines if the signal that a multicast has been missed when the difference between the sequence number of the third multicast and the previous sequence number is greater than one
5 and target information is included in the third multicast, the second initiator also determining that a multicast has been missed when the difference between the sequence number of the third multicast and the previous sequence number is equal to one and the third multicast does not include target information by comparing information included within the signal with information contained within the next multicast.

7. (Currently amended) A method for target device discovery on a network as recited in claim 6, further comprising wherein each of the other initiators requests causing the second initiator to request target information contained in the signal second multicast when the sequence number of the next multicast is greater than the previous sequence number of
5 the signal and no new target information is received in connection with the next multicast the second initiator determines that a multicast has been missed.

8. (Original) A method for target device discovery on a network as recited in claim 1, wherein the sending out occurs on a periodic basis.

9. (Original) A method for target device discovery on a network as recited in claim 1, wherein the network is one of an iSCSI network, an eSCSI network, a TCP/IP network, and an Ethernet network.

10. (Original) A method for target device discovery on a network as recited in claim 1, wherein the previous registered target re-registers by unicasting information to the master initiator on a periodic basis.

11. (Currently amended) A method for target device discovery on a network, comprising:

multicasting a signal from a master initiator over the network;

receiving a unicast from a new target recently connected to the network, ~~the new target~~
5 ~~being passive when no multicast signal from the master initiator is received;~~

adding the new target to a list of targets connected to the network; and

sending out a next multicast to other initiators, the next multicast including information regarding ~~the adding of the new target to the network.~~

12. (Original) A method for target device discovery on a network as recited in claim 11, wherein the network is one of an iSCSI network, an eSCSI network, a TCP/IP network, and an Ethernet network.

13. (Currently amended) A method for peripheral device discovery on a network as recited in claim 11, wherein the other initiators add the new target to initiator target lists in response to receiving the information regarding the new target.

14. (Currently amended) A method for target device discovery on a network as recited in claim 11, wherein the master initiator is ~~elected~~ determined by comparing device identification numbers of a plurality of initiators connected to the network, ~~the master initiator having the highest device identification number.~~

15. (Currently amended) A method for target device discovery on a network as recited in ~~claim 11~~ claim 14, wherein the device identification number is a global unique identification (GUID) number.

16. (Original) A method for target device discovery on a network as recited in claim 11, wherein the signal from the master initiator is in a form of master identification packets.

17. (Currently amended) A method for target device discovery on a network as recited in claim 11, ~~wherein the next multicast has a sequence number greater by one than a previous sequence number~~ the method further comprising:

5 causing a second initiator, in response to receiving a third multicast from the master initiator, the third multicast not including the information regarding the new target, to compare a sequence number of the third multicast with a previous sequence number of a previous multicast, the previous multicast being a most recently received multicast prior to the third multicast.

18. (Currently amended) A method for target device discovery on a network as recited in ~~claim 17 wherein each of the other initiators~~ claim 17, wherein the second initiator determines if the signal that a multicast has been missed when the difference between the sequence number of the third multicast and the previous sequence number is greater than one
5 and target information is included in the third multicast, the second initiator also determining that a multicast has been missed when the difference between the sequence number of the third multicast and the previous sequence number is equal to one and the third multicast does not include target information by comparing information included within the signal with information contained within the next multicast.

19. (Currently amended) A method for target device discovery on a network as recited in claim 18, further comprising wherein each of the other initiators requests causing the second initiator to request target information contained in the signal next multicast when the sequence number of the next multicast is greater than the previous sequence number of the signal and no new target information is received in connection with the next multicast the second initiator determines that a multicast has been missed.

20. (Currently amended) A method for target device discovery on a network as recited in claim 11, further comprising sending additional multicasts wherein the sending out occurs on a periodic basis, the additional multicasts not including the information regarding the new target.

21. (Currently amended) A method for target device discovery on a network the method being implemented by a master initiator, a master the master initiator including program instructions logic for implementing the method, the method comprising:

5 transmitting a plurality of multicasts multicasting a signal over the network, the multicasting configured to be triggered continually the multicasts being transmitted continually at a predetermined interval;

10 in response to receiving a unicast from a new target recently connected to the network, the new target being passive and configured to wait for a multicast signal from a master initiator; adding the new target to a list of targets, the adding occurring in response to the directed unicast signal;

in response to determining if a that a previously registered target re-registered with the master initiator; and initiator, maintaining the previously registered target on the list of targets;

wherein the multicasting transmits one of the multicasts includes information regarding the maintaining and the adding of targets to the network.

22. (Original) A method for target device discovery on a network as recited in claim 21, wherein the previous registered target re-registers by unicasting information to the master initiator on a periodic basis.

23. (Currently amended) A system for target device discovery on a network comprising:

a master initiator, the master initiator configured to periodically send a multicast throughout the network;

5 at least one target, the at least one target configured to remain passive until one of the multicasts ~~a multicast~~ is received from the master initiator; and

at least one slave initiator, the at least one slave initiator configured to receive target information from the ~~multicast~~ multicasts;

10 wherein the master initiator polls the at least one target by way of the ~~multicast~~ multicasts, and the at least one target responds to the one multicast through use of a unicast directed to the master initiator.

24. (Original) A system for target device discovery on a network as recited in claim 23, wherein the at least one slave initiator is configured to unicast to the master initiator a request to resend information if a multicast with updated target information was not received by the at least one slave initiator.

25. (Original) A system for target device discovery on a network as recited in claim 24, wherein the at least one slave initiator is configured to determine if the multicast with updated target information was not received by examining a sequence number of each multicast to determine if a previous multicast was missed.

26. (Original) A system for target device discovery on a network as recited in claim 25, wherein the previous multicast was missed when a last sequence number from a last multicast has incremented and no updated target information has been received.

27. (Original) A system for target device discovery on a network as recited in claim 23, wherein the network is one of an iSCSI network, an eSCSI network, a TCP/IP network, and an Ethernet network.